

CLAIMS

1. A network adapter that may be used in a network data storage system to permit data exchange among data exchanging devices and a data storage system
- 5 input/output (I/O) controller, the controller residing in the data storage system, the data exchanging devices being external to the adapter, the network adapter being one type of adapter selected from a group of different types of adapters that may communicate with the controller, the network adapter comprising:
- at least one control interface that may be coupled to the controller, each of the
- 10 different types of adapters comprising at least one respective interface that is identical to the at least one control interface; and
- at least one control logic section that may receive from the controller, via the at least one control interface, at least one command, and may transmit to the controller, via the at least one control interface, information concerning operation of
- 15 the network adapter, the at least one control logic section being configured to access, based upon the at least one command, memory that may contain the information and an executable command to be supplied to other logic in the network adapter.
2. The network adapter of claim 1, wherein the network data storage system
- 20 includes an electrical backplane to which the network adapter and the controller may be coupled, the backplane being configured to permit communication between the controller and the network adapter when the network adapter and the controller are coupled to the backplane.

3. The network adapter of claim 1, wherein the data storage system comprises a set of mass storage devices that may exchange data with the data exchanging devices via the network adapter.

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4. The network adapter of claim 1, wherein the at least one control interface comprises an asynchronous transmission interface via which the at least one command may be transmitted to the network adapter from the controller as a serial bit stream when the network adapter is coupled to the controller.

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5. The network adapter of claim 1, wherein the different types of adapters have different respective configurations, and the information may indicate one of the following: the respective configuration of the network adapter, a number of I/O ports comprised in the network adapter, a version of program code executed by the at least one control logic section, a communication speed supported by the network adapter, and an operational status of the network adapter.

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6. The network adapter of claim 1, wherein the executable command, when executed by the network adapter may prevent the network adapter from supplying an interrupt signal to the controller in response to at least one type of event that may occur.

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7. The network adapter of claim 1, wherein the executable command, when executed by the network adapter, may cause one of the following operations to occur: resetting of an operating state of one or more components of the network adapter, activation of the one or more components, and de-activation of the one or more components.

8. The network adapter of claim 7, wherein the one or more components may comprise one or more I/O ports of the network adapter.

9. The network adapter of claim 5, wherein the operational status may involve one of the following: whether a signal from one of the data exchanging devices is being received at an I/O port of the network adapter.

10. The network adapter of claim 1, wherein the executable command, when executed by the network adapter, may cause a configuration of the network adapter to be changed.

11. A method of using a network adapter that may be used in a network data storage system to permit data exchange among data exchanging devices and a data storage system input/output (I/O) controller, the controller residing in the data storage system, the data exchanging devices being external to the adapter, the network adapter being one type of adapter selected from a group of different types of adapters that may communicate with the controller, the method comprising:

coupling at least one control interface in the network adapter to the controller,
each of the different types of adapters comprising at least one respective interface that
is identical to the at least one control interface; and

receiving at least one control logic section, via the at least one control
5 interface, at least one command from the controller, the at least one control logic
section also being configured such that the at least one control logic section may
transmit to the controller, via the at least one control interface, information
concerning operation of the network adapter, the at least one control logic section
being configured to access, based upon the at least one command, memory that may
10 contain the information and an executable command to be supplied to other logic in
the network adapter.

12. The method of claim 11, wherein the network adapter is coupled to the
controller via an electrical backplane in the network data storage system, the
15 backplane being configured to permit communication between the controller and the
network adapter when the network adapter and the controller are coupled to the
backplane.

13. The method of claim 11, wherein the data storage system comprises a set of
20 mass storage devices that may exchange data with the data exchanging devices via
the network adapter.

14. The method of claim 11, wherein the at least one control interface comprises an asynchronous transmission interface via which the at least one command may be transmitted to the network adapter from the controller as a serial bit stream when the network adapter is coupled to the controller.

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15. The method of claim 11, wherein the different types of adapters have different respective configurations, and the information may indicate one of the following: the respective configuration of the network adapter, a number of I/O ports comprised in the network adapter, a version of program code executed by the at least one control
10 logic section, a communication speed supported by the network adapter, and an operational status of the network adapter.

16. The method of claim 11, wherein the executable command, when executed by the network adapter may prevent the network adapter from supplying an interrupt
15 signal to the controller in response to at least one type of event that may occur.

17. The method of claim 11, wherein the executable command, when executed by the network adapter, may cause one of the following operations to occur: resetting of an operating state of one or more components of the network adapter, activation of
20 the one or more components, and de-activation of the one or more components.

18. The method of claim 17, wherein the one or more components may comprise one or more I/O ports of the network adapter.

19. The method of claim 15, wherein the operational status may involve one of the following: whether a signal from one of the data exchanging devices is being received at an I/O port of the network adapter.

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20. The method of claim 11, wherein the executable command, when executed by the network adapter, may cause a configuration of the network adapter to be changed.